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## While loop:-

Used when you want to repeat code as long as a condition is true.

Syntax:-

while condition:

# code

Initialization

while (condition):

statements

inc/dec.

Example:-

count = 1

while count <= 5:

    print(count)

    count += 1

Print characters of "Python"

i = 0

while i < len(var):

    print(var[i])

    i += 1

Sum of Digits Program.

Ex:- 1234 → 1+2+3+4 = 10

sum = 0    num = int(input())

while num > 0:

    rem = num % 10

    sum = sum + rem

    num = num // 10

print(sum)



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## Palindrome:-

```
num = int(input("))
```

```
original = num
```

```
rev = 0
```

```
while (num > 0):
```

```
    rem = num % 10
```

```
    rev = rev * 10 + rem
```

```
    num = num // 10
```

```
print(original, rev)
```

```
if (original == rev):
```

```
    print("the num is palindrome")
```

```
else:
```

```
    print("the num is not palindrome")
```

## Fibonacci series.

```
a, b = 0, 1
```

```
i = 1
```

```
while (i <= 7):
```

```
    print(a)
```

```
s = a + b
```

```
a, b = b, s
```

```
i = i + 1
```

## Nested for loops:-

```
for i in range(1, 6):
```

```
    for j in range(1, 6):
```

```
        print(j, end = " ")
```

```
    print()
```

```
O/P: 1 2 3 4 5
```

```
     1 2 3 4 5
```

```
        1 2 3 4 5
```

```
            1 2 3 4 5
```

```
                1 2 3 4 5
```

